

REMARKS

In paragraphs 3 and 4 of the final Action, claims 16-19 and 21-28 were rejected under 35 U.S.C. 103(a) as being unpatentable over Oka et al. in view of Glaubitt et al.

In view of the rejections, claims 22 and 25 have been cancelled, and the subject matter of cancelled claims 22 and 25 have been incorporated into claim 16.

In claim 16, an antireflection film is formed of an organic film, a hard coating layer coated on the organic film, a first layer having an index of refraction and coated on the hard coating layer, and a second layer having an index of refraction lower than that of the first layer and coated on the first layer. The first layer is formed of a synthetic resin and metallic oxide particles contained in the synthetic resin. The metallic oxide is at least one selected from the group consisting of ZrO_2 , TiO_2 , NbO , ITO, ATO, SbO_2 , In_2O_3 , SnO_2 and ZnO , and the synthetic resin is ultraviolet ray curable resin or electron beam curable resin.

In the invention, the synthetic resin of the first layer includes pores therein, and the second layer partly enters the pores to firmly bond to the first layer through the pores. Thus, the first and second layers can be strongly bonded together.

The first layer is formed from a porous precursory layer having an index of refraction not greater than 1.64, and the second layer is formed from a liquid material coated on the porous precursory layer to partly enter into pores of the porous precursory layer. When the first and second layers are integrally formed, the first layer has the index of refraction not smaller than 1.64.

Namely, the precursor layer for forming the first layer has the index of refraction not greater than 1.64, but since the liquid material for forming the second layer partly enters the pores of the precursor layer, when the first and second layers are established, the first layer has the index of refraction not smaller than 1.64. In the invention, the index of refraction of the first layer changes because of the pores partly filled with the material forming the second layer.

In Oka et al., an antireflection film as shown in Fig. 16 is formed of a transparent substrate film 21, a hard coat layer 23 bonded

et al., although the coating has the pores, the metallic oxide particles are not included in the coating.

In the invention, also, the liquid material forming the second layer partly enters the pores. Thus, the first layer includes the material for forming the second layer filled in the part of the pores, the material of the first layer, metallic oxide particles and the pores not filled with the material. However, the coating in Glaubitt et al. has only pores therein. The first layer of the invention is entirely different from the coating of Glaubitt et al.

In case Oka et al. and Glaubitt et al. are combined, the material used in Glaubitt et al. may be used instead of the layer 25 or 32. Also, the material used in Glaubitt et al. may have ultrafine particles having a high refractive index as disclosed in Oka et al. However, such a combination does not disclose first layer of the present invention. Namely, in the invention, the second layer partly enters the pores in the first layer, so that the first layer has the material for forming the second layer filled in the part of the pores, the material for the first layer, the metallic oxide particles and the pores not filled with the material. The specific first layer as described herein is not disclosed from the combination of Oka et al. and Glaubitt et al.

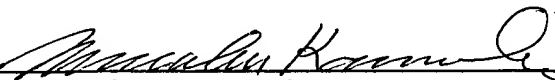
Further, in the invention, due to the above structure, the index of refraction of the first layer is not smaller than 1.64 though the precursory layer of the first layer has the index of refraction not greater than 1.64.

Therefore, even if the cited references are combined, the features of the invention are not obvious from the cited references.

Reconsideration and allowance are earnestly solicited.

Respectfully submitted,

KANESAKA AND TAKEUCHI

by 
Manabu Kanosaka
Reg. No. 31,467
Agent for Applicants

1423 Powhatan Street
Alexandria, VA 22314
(703) 519-9785



Creation date: 04-13-2004
Indexing Officer: SROLLINS - SHARON ROLLINS
Team: OIPEBackFileIndexing
Dossier: 09837618

Legal Date: 08-26-2003

No.	Doccode	Number of pages
1	CTAV	3

Total number of pages: 3

Remarks:

Order of re-scan issued on